TETRA TECH

LEVEL 2 HEALTH AND SAFETY PLAN

Note: If no contingency level of protection is selected, all employees covered under this plan must evacuate the immediate site area if air contaminant levels require upgrading PPE. Level A field work requires a Level 3 HASP. This information is available on the chemical hazards page of this HASP.

Field Activities Covered Under this HASP:

Task Description	Level of Protection[1]		Date of Activities
	Primary	Contingency	
1 Conduct groundwater sampling	☐A ☐B ☐C ☒ D	☐A ☐B ☐C ☒ D	10/31/2013-10/31/2014
2 Conduct soil sampling	☐A ☐B ☐C ☒ D	☐A ☐B ☐C ☒ D	
	☐A ☐B ☐C ☐ D	☐A ☐B ☐C ☐ D	

Site Personnel and Responsibilities (include subcontractors):

Employee Name and Office Code / Location	Task(s)	Responsibilities
Jacob Costello / DE	1, 2	• Project Manager: Manages the overall project, makes site safety coordinator (SSC) aware of pertinent project developments and plans, and maintains communications with client as necessary. Additionally, For projects lasting longer than one consecutive week on-site, the PM is responsible for conducting one field audit using Form AF-1.
Dave Kane / DE	1, 2	
TBD / DE	1, 2	• Field Team Leader: Directs field activities, makes site safety coordinator (SSC) aware of pertinent project developments and plans, and maintains communications with the Project Manager and the client as necessary • Site Safety Coordinator (SSC): Ensures that appropriate personal protective equipment (PPE) is available, enforces proper use of PPE by on-site personnel and subcontractors; suspends investigative work if personnel are or may be exposed to an immediate health hazard; implements and enforces the HASP; identifies and controls site hazards when possible; communicates site hazards to all personnel; and reports any deviations observed from anticipated conditions described in the health and safety plan to the health and safety representative. • Alternate Site Safety Coordinator (if any) • Field Personnel: Completes tasks as directed by the project manager, field team leader, and SSC, and follows the HASP and all SWPs and guidelines established in the Tetra Tech, Inc., Health and Safety Manual. • Tetra Tech-hired subcontractor personnel on site (a subcontract SSC MUST be identified by name): Completes tasks as outlined in the project scope of work in accordance with the contract. Participates in all Tetra Tech on-site safety meetings and follows all procedures and guidelines established in this HASP, as well as the company health and safety plan and program.

Note:
1. See next page for details on levels of protection

NOTE: Contingency level of protection section should be completed only if the upgraded level of protection is immediately available at the job site. If no contingency level of protection is denoted, all employees covered under this HASP must evacuate the immediate site area if air contaminant levels would require an upgrade of PPE.

Protective Equipment: (Indicate type or material as necessary for each task.)

Task	Primary Level of Protection (A,B,C,D)	PPE Component Description (Primary)	Contingency Level of Protection (A, B, C, D)	PPE Component Description (Contingency)
1	D	Respirator type: NA Cartridge type (if applicable): NA CPC material: NA Glove material(s): Nitrile Boot material: Steel-toe with boot covers Other: NA	D	Respirator type: NA Cartridge type (if applicable): NA CPC material: NA Glove material(s): Nitrile Boot material: Steel-toe with boot covers Other: NA
2		Respirator type: Cartridge type (if applicable): CPC material: Glove material(s): Boot material: Other:		Respirator type: Cartridge type (if applicable): CPC material: Glove material(s): Boot material: Other:
3		Respirator type: Cartridge type (if applicable): CPC material: Glove material(s): Boot material: Other:		Respirator type: Cartridge type (if applicable): CPC material: Glove material(s): Boot material: Other:

Respirator Notes:
Respirator cartridges may only be used for a maximum time of 8 hours or one work shift, whichever is less, and must be discarded at that time. For job sites with organic vapors, respirator cartridges may be used as described in this note as long as the concentration is less than 200 parts per million (ppm), the boiling point is greater than 70 °Celsius, and the relative humidity is less than 85 percent. If any of these levels are exceeded, a site-specific respirator cartridge change-out schedule must be developed and included in the HASP using Tetra Tech Form RP-2 (Respiratory Hazard Assessment Form)

Notes:
All levels of protection must include eye, head, and foot protection.
CPC = Chemical protective clothing
Thermoluminescent Dosimeter (TLD) Badges must be worn during all field activities on sites with radiation hazards. TLDs must be worn under CPC.

TETRA TECH

LEVEL 2 HEALTH AND SAFETY PLAN

Monitoring Equipment: All monitoring equipment on site must be calibrated before and after each use and results recorded in the site logbook

Instrument (Check all required)	Task	Instrument Reading	Action Guideline	Comments
☐ Combustible gas indicator model:	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5	0 to 10% LEL	Monitor; evacuate if confined space	
		10 to 25% LEL	Potential explosion hazard; notify SSC	
		>25% LEL	Explosion hazard; interrupt task; evacuate site; notify SSC	
☐ Oxygen meter model:	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5	>23.5% Oxygen	Potential fire hazard; evacuate site	
		23.5 to 19.5% Oxygen	Oxygen level normal	
		<19.5% Oxygen	Oxygen deficiency; interrupt task; evacuate site; notify SSC	
☐ Photoionization detector model: ☐ 11.7 eV ☐ 10.6 eV ☐ 10.2 eV ☐ 9.8 eV ☐ Other (specify): _____	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5	Any response above background to 0.5 ppm above background	PPE > Level D is NOT Authorized	
☐ Other (specify): If available, use benzene-specific Drager tube (such as 6728561) with a lower detection limit of AT LEAST 0.5 ppm ☐ Other (specify): If available, use vinyl chloride-specific Drager tube (such as 8101721) with a lower detection limit of AT LEAST 0.5 ppm	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5	Any response above BG to 0.5 ppm above BG	Monitor worker breathing zone (BZ) areas.	
		> 0.5 to 1 ppm above background	> 1 ppm above BG, evacuate the area, retreat upwind to a safe area (where BG levels exist) and allow work area to ventilate to OUTDOORS using mechanical means (fans, pumps) if possible.	
		> 1 ppm above BG	If BZ readings remain > 1 ppm BG, retreat upwind and contact Health and Safety for further direction	

Notes: eV= electron volt LEL=Lower explosive limit mrem=Millirem PEL=Permissible exposure limit ppm=Part per millions Level B is required when chemical hazards are present, but are uncharacterized. Level C may be acceptable for certain tasks in some situations. If you are uncertain, consult your RSO.

TETRA TECH

LEVEL 2 HEALTH AND SAFETY PLAN

Project-Specific Industrial Hygiene Requirements

OSHA-Regulated Chemicals*:

Check any present on the job site in any medium (air, water, soil)

- ☒ No chemicals below are located on the job site
- ☐ Friable Asbestos
- ☐ Silica, crystalline
- ☐ alpha-Napthylamine
- ☐ Methyl chloromethyl ether
- ☐ 3,3'-Dichlorobenzidine (and its salts)
- ☐ bis-Chloromethyl ether
- ☐ beta-Napthylamine
- ☐ Benzidine
- ☐ 4-Aminodiphenyl
- ☐ Ethyleneimine
- ☐ beta-Propiolactone
- ☐ 2-Acetylaminoflourene
- ☐ 4-Dimethylaminoazobenzene
- ☐ N-nitrosomethylamine
- ☐ Vinyl chloride
- ☐ Inorganic arsenic
- ☐ Lead
- ☐ Chromium (VI)
- ☐ Cadmium
- ☐ Benzene
- ☐ Coke oven emissions
- ☐ 1,2-Dibromo-3-chloropropane
- ☐ Acrylonitrile
- ☐ Ethylene oxide
- ☐ Formaldehyde
- ☐ Methylenedianiline
- ☐ 1,3-Butadiene
- ☐ Methylene chloride

* NOTE: Many states, including California and New Jersey, have chemical-specific worker protection requirements and standards for many chemicals and known or suspected carcinogens.

Emergency Contacts:		Telephone No.
WorkCare and Incident Intervention		888.449.7787, or 800.455.6155
Tetra Tech EMI 24-hour Anonymous Hazard Reporting Line		866.383.8070
U.S. Coast Guard National Response Center		800.424.8802
InfoTrac		800.535.5053
Poison Control		800.222.1222
Fire department		911
Police department		911
Personnel Call-Down List:		
Job Title or Position:		**Cell Phone:**
Regional Safety Officer	**Chris Draper**	615.969.1334
Project Manager:	**Dave Kane**	302.283.2251
Field Team Leader/ Site Safety Coordinator (SSC):	**Jacob Costello**	302.420.7553
Subcontractor SSC:	N/A	

Medical and Site Emergencies:

Signal a site or medical emergency with three blasts of a loud horn (car horn, fog horn, or similar device). Site personnel should evacuate to the area of safe refuge designated on the site map.

Hospital Name: Nanticoke Memorial Hospital
Address: 801 Middleford Road (Road 535), Seaford, DE

General Phone: (302) 629-6611
Emergency Phone: (302) 629-6611
Ambulance Phone: 911

Hospital called to verify emergency services are offered? YES ☒ NO ☐

Step-by-step Route to Hospital: (see Page 11 of 12 for route map)

Note: This page must be posted on site.

Decontamination Procedures

The site safety coordinator overseas implementation of project decontamination procedures and is responsible for ensuring they are effective.

Personnel Decontamination

Level D Decon - ☐ Wet ☒ Dry

Level C Decon - ☐ Wet ☐ Dry

Level B Decon – Briefly outline the level B decontamination methods to be used on a separate page attached to this HASP.

Level A Decon – A Level 3 HASP is required. Notify your regional health and safety representative and health and safety director.

Equipment Decontamination

All tools, equipment, and machinery from the Exclusion Zone (hot) or Contamination Reduction Zone (warm) are decontaminated in the CRZ before they are removed to the Support Zone (cold). Equipment decontamination procedures are designed to minimize the potential for hazardous skin or inhalation exposure, cross-contamination, and chemical incompatibilities.

Respirator Decontamination

N/A

Waste Handling for Decontamination

Procedures for decontamination waste disposal meet all applicable local, state, and federal regulations.

Decontamination Equipment

- ☐ Washtubs
- ☐ Buckets
- ☐ Scrub brushes
- ☐ Pressurized sprayer
- ☒ Detergent [Liquinox]
- ☐ Solvent [Type]
- ☐ Household bleach solution

  Concentration/Dilution: _____
- ☐ Deionized water
- ☐ Disposable sanitizer wipes
- ☐ Facemask sanitizer powder
- ☐ Wire brush
- ☒ Spray bottle
- ☐ Tubs / pools
- ☐ Banner/barrier tape
- ☐ Plastic sheeting
- ☐ Tarps and poles
- ☒ Trash bags
- ☐ Trash cans
- ☐ Duct tape
- ☒ Paper towels
- ☐ Folding chairs
- ☒ Other (Liquinox)

Emergency Response Planning

During the pre-work briefing and daily tailgate safety meetings, all on-site employees will be trained in the provisions of emergency response planning, site communication systems, and site evacuation routes.

In the event of an emergency that necessitates evacuation of a work task area or the site, the following procedures will take place.

- The Tetra Tech SSC will contact all nearby personnel using the on-site communications to advise the personnel of the emergency.
- The personnel will proceed along site roads to a safe distance upwind from the hazard source.
- The personnel will remain in that area until the SSC or an authorized individual provides further instructions.

In the event of a severe spill or a leak, site personnel will follow the procedures listed below.

- Evacuate the affected area and relocate personnel to an upwind location.
- Inform the Tetra Tech SSC, a Tetra Tech office, and a site representative immediately.
- Locate the source of the spill or leak, and stop the flow if it is safe to do so.
- Begin containment and recovery of spilled or leaked materials.
- Notify appropriate local, state, and federal agencies.

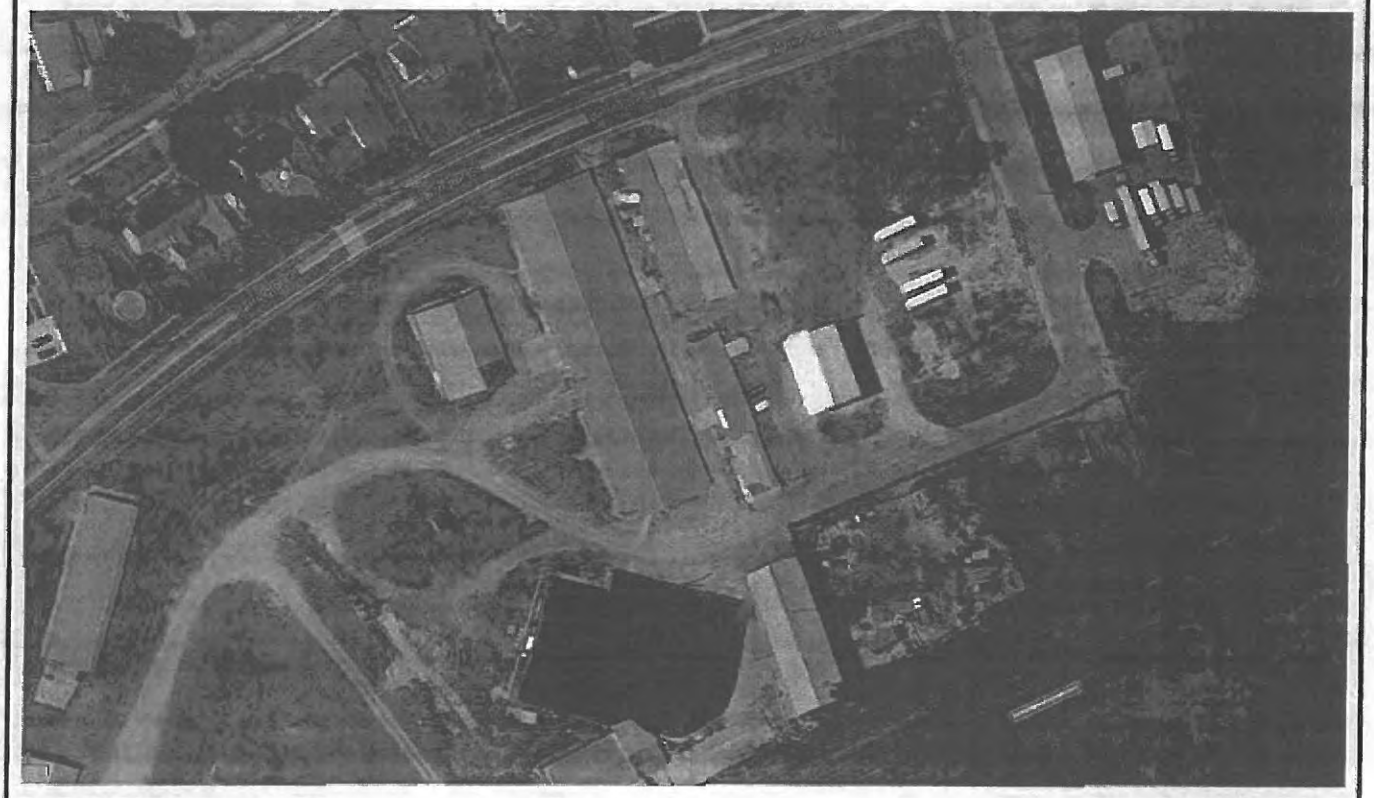
In the event of severe weather, site personnel will follow the procedures listed below.

- Site work shall not be conducted during severe weather, including high winds and lightning.
- In the event of severe weather, stop work, lower any equipment (drill rigs) and evacuate the affected area.
- Severe weather may cause heat or cold stress. Refer to SWPs 5-15 and 5-16 for information on both.

All work-related incidents must be reported. According to TtEMI's reporting procedures, for non-emergency incidents you should:

- Notify WorkCare and Incident Intervention at 888.449.7787, or 800.455.6155
- Notify your Project Manager or Safety Manager via phone immediately.
- Complete a "Tetra Tech Incident Report" (Form IR) within 24 hours and send it to your RSO. If an injury or illness has occurred, the Form IR-A and the WorkCare HIPAA form must be completed at the same time the Form IR is completed.

Site Map (May be drawn after crews arrive onsite or inserted using aerial photographs, site figures, etc.):



Hospital Route Map (attach or insert):

Directions from Seaford Gas Site to Beebe Medical Center:

1. Start out going north on S Shipley Street toward Pennsylvania Avenue.
2. Turn right onto Pennsylvania Avenue.
3. Stay straight on Pennsylvania Avenue (becomes High Street).
4. Stay straight on High Street (becomes Middleford Road).
5. Nanticoke Memorial Hospital is on the right.

Note: A dry-run should be conducted to establish a physical location associated with the map included in the HASP. Verbal verification from the hospital emergency room should also be obtained to ensure that the hospital will accept chemically contaminated patients.

Hospital Route Map

A. Seaford Gas Site (Address: S. Shipley Street, Seaford, DE)

B. Nanticoke Memorial Hospital (Address: 801 Middleford Road (Road 535), Seaford, DE)

TETRA TECH

APPROVAL AND SIGN-OFF FORM

Project No.: 103S257406

I have read, understood, and agree with the information set forth in this Health and Safety Plan and will follow the direction of the Site Safety Coordinator (SSC) as well as procedures and guidelines established in the Tetra Tech, Inc., Health and Safety Manual. I understand the training and medical requirements for conducting field work and have met these requirements.

Tetra Tech has prepared this plan solely for the purpose of the health and safety protection of Tetra Tech employees. Subcontractors, visitors, and others at the site, while required to read and follow the provisions outlined in this plan at a minimum, should refer to their safety program for specific information related to their health and safety protection.

Name	Company / Agency / Organization	Signature	Date

I have read, understood, and agree with the information set forth in this Health and Safety Plan and comply with and will enforce this HASP, as well as procedures and guidelines established in the Tetra Tech, Inc., Health and Safety Manual

Name	Project-Specific Position	Signature	Date
Dave Kane	Project Manager		
Jacob Costello	Field Team Leader		
Jacob Costello	Site Safety Coordinator		
N/A	Subcontractor SSC		

Tetra Tech has prepared this plan solely for the purpose of the health and safety protection of Tetra Tech employees. Subcontractors, visitors, and others at the site, while required to read, acknowledge and follow the provisions outlined in this plan at a minimum, should refer to their safety program for specific information related to health and safety.

Note: Use Additional sheets as necessary to ensure that all personnel sign and affirm this document.

EXHIBIT 1

TETRA TECH

Safety Excellence

VOLUNTARY PROTECTION PROGRAM

Management Leadership

Lead by example. Good managers recognize the benefits of a strong safety program and ensure that their personnel and subcontractors have the right tools, equipment, and attitude to work safely.

Some areas where effective management leadership for safety can be demonstrated include:

- Provide visible safety leadership - start meetings with a safety topic, integrate safety into planning, scheduling, and budgeting processes, take personal action to resolve safety issues.
- Become involved in incident reporting, investigation, corrective action - share lessons learned.
- Include subcontractors in your safety program and oversee their work.

Employee Involvement

Get involved! Take personal action and work directly with your supervisor daily to identify, control, or eliminate potential safety hazards.

Other ways to become involved in the safety program and improve work conditions include:

- Initiate hazard reports to identify hazards, suggest improvements, and recognize safe behaviors
- Participate in safety meetings and worksite safety inspections (daily, weekly, monthly, and quarterly)
- Participate in incident reports, investigations, corrective actions, and Lessons Learned

Worksite Analysis

The process of identifying and evaluating potential hazards is a critical element in achieving zero incidents and creating low risk and hazard-free work areas.

Worksite analysis methods used to identify and evaluate potential hazards include:

- Safety inspections (daily, weekly, monthly, and quarterly)
- Develop or review safe work procedures, AHA's, and the HASP
- Monitoring for air quality, heat stress, noise, ergonomics and other job hazards

Hazard Prevention and Control

Eliminating hazards from your job, preventing new hazards, and controlling known hazards are fundamental parts of the projects safety program.

Important points include:

- Control hazards by:
  - Installing and maintaining ***Engineering Controls***
  - Following ***Administrative/Work Practice Controls*** (HASP, AHAs, and safe work practices)
  - Specifying and wearing ***Personal Protective Equipment*** where needed
- Perform integrated safety reviews for new or modified work tasks
- Consult with qualified medical and safety professionals as needed

Safety and Health Training

Effective safety training is an important element in incident prevention. Remember, if you are unfamiliar with the work or feel that you don't have the necessary training, speak up and notify your team leader or project manager.

Safety training methods that may be used at the project include:

- New employee orientation, including HASP and task-specific training
- Project meetings, daily briefings, and/or task briefings
- Lessons learned and monthly safety communications

DEFINITIONS AND NOTES

Emergency Contacts

WorkCare - For issues requiring an Occupational Health Physician; assistance is available 24 hours per day, 7 days per week.

InfoTrac - For issues related to incidents involving the transportation of hazardous chemicals; this hotline provides accident assistance 24 hours per day, 7 days per week

U.S. Coast Guard National Response Center - For issues related to spill containment, cleanup, and damage assessment; this hotline will direct spill information to the appropriate state or region

Poison Control Center – For known or suspected poisoning.

Limitations:

The Level-Two HASP is not appropriate in some cases:

- Projects involving unexploded ordnance (UXO), radiation sources as the primary hazard, or known chemical/biological weapons site must employ the Level 3 HASP
- Projects of duration longer than 90 days may need a Level 3 HASP (consult your RSO)

Decontamination:

Decontamination Solutions for Chemical and Biological Warfare Agents[a]: PPE and equipment can be decontaminated using 0.5 percent bleach (1 gallon laundry bleach to 9 gallons water) for biological agents (15 minutes of contact time for anthrax spores; 3 minutes for others) followed by water rinse for chemical and biological agents. In the absence of bleach, dry powders such as soap detergents, earth, and flour can be used. The powders should be applied and then wiped off using wet tissue paper. Finally, water and water/soap solutions can be used to physically remove or dilute chemical and biological agents. Do not use bleach solution on bare skin; use soap and water instead. Protect decontamination workers from exposure to bleach.

Decontamination for Radiological and Other Chemicals: Primary decontamination should use Alconox and water unless otherwise specified in chemical specific information resources. The effectiveness of radiation decontamination should be checked using a radiation survey instrument. Decontamination procedures should be repeated until the radiation meter reads less than 100 counts per minute over a 100-square-centimeter area when the probe is held 1 centimeter from the surface and moving slower than 2.5 centimeters per second.

Decontamination Corridor: The decontamination setup can be adjusted to meet the needs of the situation. The decontamination procedures can be altered to meet the needs of the specific situation when compound- and site-specific information is available.

Decontamination Waste: All disposable equipment, clothing, and decontamination solutions will be double-bagged or containerized in an acceptable manner and disposed of with investigation-derived waste.

Decontamination Personnel: Decontamination personnel should dress in the same level of PPE or one level below the entry team PPE level.

All investigation-derived waste should be left on site with the permission of the property owner and the EPA on-scene coordinator. In some instances, another contractor will dispose of decontamination waste and investigation-derived waste. DO NOT place waste in regular trash. DO NOT dispose of waste until proper procedures are established.

Notes:

[a] Source: Jane's Information Group. 2002. *Jane's Chem-Bio Handbook*. Page 39.

EXHIBIT 1

TETRA TECH, INC.

DAILY TAILGATE SAFETY MEETING FORM

Date: _____ Time: _____ Project No.: _____

Client: _____ Site Location: _____

Site Activities Planned for Today: _____

Weather Conditions: _____

Safety Topics Discussed	
Protective clothing and equipment:	
Chemical and physical hazards:	
Emergency procedures:	
Equipment hazards:	
Other:	
Attendees	
Printed Name	**Signature**

Meeting Conducted by:

_____ _____

Name Signature

10/08

TETRA TECH EM INC.

HEALTH AND SAFETY PLAN AMENDMENT

Site Name: _____

Amendment Date: _____

Purpose or Reason for Amendment: _____

_____

_____

Required Additional Safe Work Practices or Activity Hazard Analyses: _____

_____

Required Changes in PPE: _____

_____

_____

Action Level Changes: _____

_____

_____

_____

_____

AMENDMENT APPROVAL

RSO or Designee	_____ Name	_____ Signature	_____ Date
Site Safety Coordinator	_____ Name	_____ Signature	_____ Date

Date presented during daily site safety meeting: _____

TETRA TECH, INC.

FIELD AUDIT CHECKLIST

Project Name: _____ Project No.: _____

Field Location: _____ Completed by: _____

Project Manager: _____ Site Safety Coordinator: _____

General Items		In Compliance?		
Health and Safety Plan Requirements		Yes	No	NA
1	Approved health and safety plan (HASP) on site or available			
2	Names of on-site personnel recorded in field logbook or daily log			
3	HASP compliance agreement form signed by all on-site personnel			
4	Material Safety Data Sheets on site or available			
5	Designated site safety coordinator physically present on jobsite			
6	Daily tailgate safety meetings conducted and documented on Form HST-2			
7	Documentation available proving compliance with HASP requirements for medical examinations, fit testing, and training (including subcontractors)			
8	HASP onsite matches scope of work being conducted			
9	Emergency evacuation plan in place and hospital located			
10	Exclusion, decontamination, and support zones delineated and enforced			
11	HASP attachments present onsite (VPP sheet, audit checklist, AHA, etc.)			
12	Illness and injury prevention program reports completed (California only)			
Emergency Planning				
13	Emergency telephone numbers posted			
14	Emergency route to hospital posted			
15	Local emergency providers notified of site activities			
16	Adequate safety equipment inventory available			
17	First aid provider and supplies available			
18	Eyewash solution available when corrosive chemicals are present			
Air Monitoring				
19	Monitoring equipment specified in HASP available and in working order			
20	Monitoring equipment calibrated and calibration records available			
21	Personnel know how to operate monitoring equipment and equipment manuals available on site			
22	Environmental and personnel monitoring performed as specified in HASP			

Safety Items		In Compliance?		
Personal Protection		Yes	No	NA
23	Splash suit, if required			
24	Chemical protective clothing, if required			
25	Safety glasses or goggles (always required)			
26	Gloves, if required			
27	Overboots, if required			
28	Hard hat (always required)			
29	High visibility vest, if required			
30	Hearing protection, if required			
31	Full-face respirator, if required			
Instrumentation				
32	Combustible gas meter and calibration notes			
33	Oxygen meter and calibration notes			
34	Organic vapor analyzer and calibration notes			
Supplies				
35	Decontamination equipment and supplies			
35	Fire extinguishers			
37	Spill cleanup supplies			
Corrective Action Taken During Audit:				

Note: NA = Not applicable

Auditor's Signature

Site Safety Coordinator's Signature

Date

Tetra Tech, Inc.

ACTIVITY HAZARD ANALYSIS (AHA)

Tetra Tech EM Inc.

Monitoring Well Sampling (Pumping)

Task Description

This Activity Hazard Analysis (AHA) applies to collection of grab groundwater samples. It has been developed and approved by the Health and Safety Department. The AHA identifies potential hazards posed by each major step in this task, lists procedures to control hazards, and presents required safety equipment, inspections, and training.

Hazards		Actions
Task Steps Site preparation	**Potential Hazards** SLIP/TRIP/FALL LIFTING – SPRAIN/STRAIN	**Critical Safety Procedures and Controls** • Visually inspect the area for slippery spots or debris and correct if found • Wear steel-toed, non-skid boots in accordance with Tetra Tech EMI policy • Use proper lifting techniques (lift with legs not back)
Open well and measure depth to water and/or bottom	EMPLOYEE EXPOSURE	• Use PID or FID to monitor well for vapors in well head and breathing zone. • Wear safety glasses and nitrile gloves to protect against splash
Connecting and disconnecting pump to tubing and power source	LACERATION ELECTRICAL SHOCK	• Use double-bladed cutting tool to open acetate sleeve – USE EXTREME CAUTION • Cut tubing away from self or other personnel • Use caution and follow manufacturer's instructions when connecting to vehicle battery or portable generator and when adding fuel to generator tank.
Purging and sampling and sample handling	EMPLOYEE EXPOSURE LACERATION SLIP/TRIP/FALL LIFTING – SPRAIN/STRAIN	• Use PID or FID to monitor breathing zone • Wear safety glasses and nitrile gloves • Handle glass containers carefully; dispose of any broken glass shards • Use proper lifting techniques, including obtaining help with heavy coolers
Equipment to be Used • Specified PPE • Sampling equipment, pumps, bottle ware, etc. • Air monitoring equipment IAW site HASP • First aid kit & eye wash	**Inspection Requirements** • PPE prior to use • Inspect and calibrate any monitoring equipment	**Training Requirements** • As specified in site HASP

Tetra Tech, Inc.	ACTIVITY HAZARD ANALYSIS (AHA) Tetra Tech EM Inc. **Soil Sampling**

Task Description

This Activity Hazard Analysis (AHA) applies to collection of grab soil samples. It has been developed and approved by the Director of Health and Safety for Tetra Tech EMI. The AHA contains potential hazards posed by each major step in this task, lists procedures to control hazards, and presents required safety equipment, inspections, and training.

Hazards		Actions
Task Steps	**Potential Hazards**	**Critical Safety Procedures and Controls**
Set up equipment at sampling location	SLIP/TRIP/FALL BACK STRAIN/SPRAIN	• Visually inspect the area for slippery spots or debris and correct if found • Wear steel-toed, non-skid boots in accordance with Tetra Tech EMI policy • Use proper lifting techniques (lift with legs not back)
Dig to appropriate depth with appropriate tools	SLIP/TRIP/FALL BACK STRAIN/SPRAIN	• Wear steel-toed, non-skid boots in accordance with Tetra Tech EMI policy • Use proper digging techniques • Wear gloves
Extract Soil	EMPLOYEE EXPOSURE	• Wear safety glasses and nitrile gloves
Fill sample bottles with sample material, load coolers and IDW (if appropriate) into vehicle	LACERATION	• Handle all glass containers carefully • Have a first aid kit on-site available

		for small cuts • Dispose of all broken shards immediately
Store sample containers in coolers and load onto vehicles	SLIP/TRIP/FALL BACK STRAIN/SPRAIN	• Ensure all debris has been removed from the path of travel • Use proper lifting techniques, including obtaining help with heavy coolers
Equipment to be Used • Level D PPE (steel-toed boots, safety glasses, nitrile gloves) • Reflective safety vest if in areas of vehicle traffic • First Aid Kit • Disposable scoop • Hand Auger • Shovel	**Inspection Requirements** • None	**Training Requirements** • Safe Lifting Procedures • Personal Protective Equipment • Hazardous Waste Operations and Emergency Response (40-hour and current 8-hour update) • CPR/First Aid (one employee on-site must have current CPR/First Aid training)

EXHIBIT 2

STATE OF DELAWARE
DEPARTMENT OF NATURAL RESOURCES
& ENVIRONMENTAL CONTROL
DIVISION OF WASTE AND HAZARDOUS SUBSTANCES
391 LUKENS DRIVE
NEW CASTLE, DELAWARE 19720-2774

SITE INVESTIGATION &
RESTORATION SECTION

TELEPHONE: (302) 395 - 2600
FAX NO.: (302) 395 – 2601

February 24, 2015

Mr. David R. De Caro, Strategic Projects Director
Chesapeake Utilities Corporation
909 Silver Lake Boulevard
Dover, DE 19904

VIA CERTIFIED MAIL
RETURN RECEIPT REQUESTED
7014 1200 0000 3589 1120

RE: Voluntary Cleanup Program (VCP) Application
Seaford Town Gas Site (DE-0061)

Dear Mr. De Caro:

The purpose of this letter is to notify Chesapeake Utilities Corporation of its liability, pursuant to Section 9105 of the Delaware Hazardous Substance Cleanup Act, 7 Del. C., Chapter 91 (HSCA), with respect to the Seaford Town Gas Site (the "Site"), located at Budd Street in Seaford. The approximate 0.79 acre Site is identified on the tax maps of Sussex County as tax parcel number 5-31-13.00-0006.00. As an owner of the Site, Chesapeake Utilities Corporation is a potentially responsible party (PRP) as defined in Section 9103(23) of HSCA.

The Delaware Department of Natural Resources and Environmental Control (DNREC) has documented the release or threatened release of hazardous substances, pollutants, or contaminants at the above-referenced Site. DNREC believes that further action is required under HSCA. The basis of the Department's position includes, but is not limited to, the presence of hazardous substances, including volatile organic compounds (VOCs), semi- volatile organic compounds (SVOCs) and heavy metals at the Site.

Section 9109 of HSCA grants the Secretary of DNREC power to require PRPs to undertake response actions. However, DNREC encourages PRPs to enter into voluntary agreements to provide appropriate responses to prevent threats to public health and welfare or the environment.

In July 1995, the Department amended HSCA and established a Voluntary Cleanup Program (VCP) to address sites which satisfy the "Site Eligibility Requirement" as outlined in the document entitled "An Introduction to Delaware's Voluntary Cleanup and Brownfield Programs" (March 1998). The VCP approach allows a remedy, as defined in the Regulations, to be performed under the authority of 7 Del. C., Chapter 91, under a streamlined agreement. The Seaford Town Gas Site is one such site that would qualify to perform a remedy under the VCP. The VCP allows for an expedited cleanup process with reduced transaction costs. More

information about the VCP is available at
http://www.dnrec.delaware.gov/dwhs/SIRB/Pages/Voluntary_Cleanup_Program.aspx
Please review the enclosed VCP application carefully and contact the Department with any questions. If you wish to participate in the VCP, please respond with a willingness to proceed **within thirty (30) days of your receipt of this notice letter.** Meetings will take place at the DNREC office at 391 Lukens Drive in New Castle, Delaware.

If we do not hear back from you within this timeframe, DNREC intends to take any enforcement action under applicable law to require that a remedy be performed at the Site. This will include scheduling a hearing to issue a Secretary's Order to require to Chesapeake Utilities Corporation implement a remedy at the Site.

If you have any questions pertaining to this letter or the provisions of HSCA, please contact Robert Asreen of my staff or me at (302)395-2600.

Sincerely,

Timothy Ratsep
Environmental Program Administrator

EML/TTR:vdh
EML15026.doc
DE 0061 II H 3

Enclosures: VCP Application

pc: Paul Will Environmental Program Manager, DNREC-SIRS (w/o Enclosures)
Robert Asreen, Project Manager, DNREC-SIRS (w/o Enclosures)
Robert Phillips, Deputy Attorney General
Robert Newsome, Public Information Officer
Elizabeth LaSorte, Paralegal

VOLUNTARY CLEANUP PROGRAM AGREEMENT FOR FACILITY EVALUATION/REMEDIAL INVESTIGATION FEASIBILITY STUDY/INTERIM ACTION/REMEDIAL DESIGN/REMEDIAL ACTION

IN THE MATTER OF
Seaford Town Gas Site (DE-0061)
AND
Chesapeake Utilities Corporation

AGREEMENT

This Voluntary Cleanup Program ("VCP") Agreement is entered into by Chesapeake Utilities Corporation (hereinafter "Respondent") and the Department of Natural Resources & Environmental Control (hereinafter "DNREC" or "Department") pursuant to the Hazardous Substance Cleanup Act ("HSCA"), 7 Del.C. Chapter 91 and the Delaware Regulations Governing Hazardous Substance Cleanup ("Regulations").

FINDINGS OF DNREC

1. The property that is the subject of this Agreement, the former Seaford Town Gas location, Budd Street, Seaford, Delaware, 19973, comprised of approximately 0.79 acres, being Sussex County Tax Parcel 5-31-13.00-0006.00 (hereinafter "the Site"), is owned by Chesapeake Utilities Corporation. The Site is bounded generally by property zoned as light industrial now or formerly owned by Parsons Brothers and railroad tracks. At the present time the Site encompasses the referenced 0.79 acre property owned by Respondent. The Site boundaries may change based upon the results of the investigation.

2. The Department believes that further investigation should be performed to determine whether a cleanup at the Site is necessary.

3. The intent of this Agreement is to allow Respondent to conduct the activity(s) outlined herein with oversight from the Department and in accordance with the guidance documents described below in Paragraph 5. Respondent has indicated to the Department in its (application or letter) dated April 3, 2015, that it wishes to conduct the following activity(s) at the Site with the Department's oversight:

Additional sampling and investigation of the Seaford Town Gas Site, DE-0061.

4. By entering into this Agreement, Respondent does not admit to any fact, fault, or liability under any statute, regulation, or common law for conditions which existed before, during, or after Respondent's execution of this Agreement.

Now therefore, based on the foregoing findings and pursuant to 7 Del. C., Chapter 91 and the Regulations, the Department and Respondent hereby agree that, in order to protect public health, welfare and the environment, the following actions shall be taken at the Site:

I. RESPONSE ACTION

5. All remedial activity(s) conducted pursuant to this Agreement shall be done in accordance with the Regulations and the following guidance documents:

a. Standard Operating Procedures for Chemical Analytical Programs.

b. All applicable Policies, Procedures and/or Guidance in accordance with HSCA and the Regulations.

6. Unless otherwise expressly stated, the definitions provided in the Regulations shall control the meaning of terms used in this Agreement.

7. The Department approves Duffield Associates as the Consultant and its designated laboratory as required under Paragraph 10 of this Agreement. Respondent shall conduct the activities consistent with the DNREC approved Conceptual Site Model (CSM) and Sampling and Analysis Plan (SAP) as attached hereto as Exhibit "A". If Respondent desires to conduct any additional phases of work at the Site beyond what is called for in the SAP, Respondent shall submit a new or revised or amended SAP for the implementation of such additional phases of the work, when appropriate, for the Department's review and approval. The Work to be undertaken by Respondent shall be in accordance with the Schedule attached hereto as Exhibit "B".

8. The Department reserves the right to request any amendments to the SAP during the course of the scheduled Work if conditions arise which were not expected at the time of the Department's approval of the SAP. It is understood and agreed by the parties that any such amendments shall be governed by the Regulations and guidance documents in effect as referenced above in Paragraph 5.

9. Within thirty (30) calendar days after the Department's receipt of any submission pursuant to the SAP, the Department will inform Respondent in writing of any deficiencies in the submission, as determined pursuant to HSCA, the Regulations, and the guidance documents, that will prevent the Department from conducting its review. The Department will notify Respondent in writing of the timeframe required for the Department to complete the review.

10. Within seven (7) days after the effective date of this Agreement, Respondent will submit to the Department: a) the name, address and telephone number of the individual who will be the contact for Respondent regarding technical matters concerning this Agreement; b) the names and addresses of the designated agents for Respondent for the purpose of service for all matters concerning this Agreement including the name of the person who will receive the statement of account from the Department under Paragraph 13 of this Agreement; c) the name of the HSCA certified consulting firm; and, d) the name of the HSCA approved laboratory that will perform

the analytical work for the Department's approval. If the Respondent wishes to later change the consultant, Project Manager, or the laboratory which was initially approved, the Department's approval will be required for such change. All approvals under this paragraph shall be in writing.

11. Respondent may terminate this Agreement if it determines that it is no longer feasible or desirable to continue with the work required herein, when Respondent:

a) Submits full payment to the Department for any oversight costs incurred by the Department pursuant to this Agreement which Respondent has not paid;

b) Notifies the Department in writing of its intentions to terminate this Agreement at least ten (10) days prior to the date of such termination;

c) Submits all data generated pursuant to this Agreement; and

d) Certifies to DNREC that no environmental hazards exist at the Site as a result of Respondent's actions pursuant to this Agreement which did not exist prior to such actions, and receives DNREC's written concurrence as to such certification. Such concurrence will not be unreasonably withheld. If DNREC does not give such concurrence, Respondent shall comply with all reasonable directives by DNREC in order to remove any such environmental hazards.

II. PROJECT COORDINATION

12. Unless otherwise directed by the Department, Respondent shall submit two (2) copies of all documents required by this Agreement to the person identified below, who shall be the Project Manager for this Site and the Department's contact person for the Respondent for all matters concerning this Agreement.

Robert C. Asreen, Jr., 391 Lukens Drive, New Castle, DE 19720-2774

III. FINANCIAL OBLIGATIONS

13. Respondent shall pay to the Department all costs incurred by the Department in preparing this Agreement, in overseeing work at the Site, and in providing public information and conducting community relations about the site as well as in complying with any public notice, public hearing or comment provisions required or authorized by HSCA. Respondent shall submit a check to the Department in the amount of $5,000.00 as a partial payment towards the estimated cost of preparing this Agreement and of oversight by the Department for the review of the CSM and SAP and for the work conducted in accordance with the SAP. The check shall be drawn in favor of the "Department of Natural Resources & Environmental Control." The Department will maintain an account in the name of the Site where this money will be deposited. Costs incurred by the Department will be drawn against this account. Following the effective date of this Agreement, the Department will send Respondent a current statement of Respondent's account once every quarter. Whenever the Department determines that the funds in the account are not sufficient to cover the Department's

estimated future costs for the next thirty (30) days, the Department will send Respondent a current statement of Respondent's account along with the estimated future costs and a request for a deposit of an additional $5,000.00, or an amount of additional funds sufficient to cover the Department's estimated future costs for the next quarter, whichever is greater. Within thirty (30) days of this request, Respondent shall submit a check to the Department, in the amount of the request and payable as set out before, for deposit into the Site account. The Department will draw upon these funds to cover the Department's actual costs as they are incurred during that next quarter. Failure to comply with any of these financial terms will result in the Department suspending further work on the Site until the required payment is received. After completion of all work required by this Agreement and any required public notice and comment as required by HSCA, the Department will return to Respondent any funds which remain in the Site account after all costs, as described above, have been paid to the Department, along with a final accounting of all costs incurred by DNREC and all transactions in the Site account. Before beginning any additional phases of the work beyond that called for herein, a check for the cost of the work and related matters for the next quarter estimated by the Department, less any balance unused from the Site account, shall be submitted by Respondent. Respondent's accountant's name is Matt Dewey, Director of Shared Accounting Services. His phone number is 302-734-6736.

14. Oversight costs, may include, but are not limited to, costs incurred by the Department after complete execution of the VCP Agreement in overseeing Respondent's implementation of the requirements of this Agreement, and activities performed by the Department at the Site as part of the investigation, study and cleanup, in providing public information and conducting community relations, and in complying with any public notice, public hearing or public comment provisions required or authorized by HSCA. Costs shall include all direct and indirect costs, including but not limited to, time and travel costs of the Department personnel, and associated indirect costs, contractor costs, collection and analysis of split samples, Site visits, inspection of field activities and review and approval or disapproval of reports.

VI. RESERVATION OF RIGHTS

15. The Department reserves the right to unilaterally terminate this Agreement in the event that: a) Respondent violates or fails to meet any terms or obligations of this Agreement, b) the Site becomes an imminent threat to public health, welfare, or the environment, c) the Department determines that satisfactory progress is not being made at the Site, d) Respondent declines to implement the Work Plan after being notified by the Department that it has been approved, or e) Respondent declines to amend the Work Plan to incorporate any amendments requested by the Department. The Department's termination of this Agreement shall be effective ten (10) days after notifying the Respondent in writing of its intention to terminate, except as provided in Subparagraph b) above in which event any notice of termination shall become effective immediately.

16. Except as provided in Paragraph 26 below, nothing herein, including any document the Department issues as may be called for herein, shall be interpreted to constitute a release or waiver of liability for any of the conditions which existed before, during, or after the Department's execution of this Agreement.

V. GENERAL CONDITIONS

17. Respondent shall, in addition to any other obligation required by law, notify the Department contact person immediately upon knowledge of any condition at the Site which poses an immediate threat to public health and/or the environment.

18. Respondent shall perform all work conducted pursuant to this Agreement in accordance with HSCA, the Regulations, the guidance documents, and applicable professional standards.

19. Respondent shall conform all actions required by this Agreement with all applicable federal, State and local laws and regulations.

20. Nothing in this Agreement shall relieve Respondent from its obligation to comply with all other applicable laws and regulations.

21. Respondent shall preserve all potential evidentiary documentation or materials found at the Site which may provide a nexus between the contaminated Site and any potentially responsible party, or lead to the discovery of other areas of potential contamination at the Site, including without limitation, documents, labels, drums, bottles, boxes or other containers, and/or other physical materials that could lead to the establishment of the identity of any person who generated, treated, transported, stored or disposed of hazardous substances at the Site, until written approval is received from the Department to do otherwise. The Department shall provide the Respondent with such written approval within a reasonable period of time after Respondent informs the Department of the existence of potential evidentiary documentation or materials.

22. Respondent shall submit to the Department all data and information concerning contamination at the Site, including technical records and contractual documents, and raw sampling and monitoring data, developed pursuant to this Agreement. If Respondent believes any such data or information is protected by a confidence and/or privilege, it shall retain the data and information and notify the Department in writing of the general nature of the document and the privilege claimed. Respondent may request that the Department keep information contained in a submission to the Department confidential pursuant to 29 Del. C. Chapter 100.

23. This Agreement shall be governed and interpreted under the laws of the State of Delaware.

24. This Agreement shall be binding, jointly and severally, on each signatory, its successors and assignees. No change in the ownership, corporate, or business status of any signatory, or of the Site, shall alter any signatory's responsibilities under this Agreement.

25. Respondent shall indemnify the State of Delaware, its agencies, departments, agents and employees and hold them harmless from any and all claims or causes of action arising from or on account of acts or omissions of Respondent, assignees, or any persons including, but not limited to, firms, corporations, subsidiaries, and contractors in carrying out activities under this Agreement. The State of Delaware, or any agency or authorized representative thereof, shall not

be held as a party to any contract entered into by Respondent in carrying out activities under this Agreement.

26. Upon successful completion of all activities required in the Scope of Work and SAP, the Department may issue Respondent a "Certification of Completion of Remedy" ("Certificate") if the Department determines that no additional activities are required to remedy contamination at the Site or protect public health, welfare or the environment. If the Department issues a Certificate, the Respondent shall have resolved its liability to the Department pursuant to 7 Del. C. Chapter 91 for conditions known by the Department to be existing on the Site at the time the Certificate is issued. Whether or not a Certificate is issued by the Department, upon successful completion of all activities required in the Scope of Work and SAP, and any amendments thereto, Respondent shall have resolved its liability to the Department pursuant to 7 Del. C. Chapter 91 for those activities addressed in the Scope of Work and SAP; provided, however, that the Department reserves the right to bring any appropriate enforcement action against Respondent for any portions of a remedy not addressed in the Scope of Work and SAP, and Respondent shall not have resolved its liability as to such other portions of a remedy at the Site. The Certificate will be considered invalid, and all rights and entitlements granted thereby shall be considered revoked, if any one of the following occurs:

a) Respondent submits fraudulent information or engages in fraudulent practices during the voluntary performance of Work;

b) Future Site development which is inconsistent with the uses permitted under the current zoning classification or future use of the property which is inconsistent with a property environmental covenant, if required by the Department;

c) Respondent violates, or permits others to violate, the terms of any Long Term Stewardship (LTS) Plan or the Certification of Completion of Remedy;

d) Respondent interferes with, or permits others to interfere with, any aspect of the remedy addressed in the Certification of Completion of Remedy; or

e) New information arises which indicates that remediation was not completed as described in the Scope of Work or that the work performed is no longer protective of public health, welfare, or the environment.

27. This Agreement shall become effective upon execution hereof by all parties.

28. This Agreement may be amended in writing by mutual consent of the Department and the Respondent. Amendments shall become effective when signed by all parties.

29. Whenever the approval, consent or cooperation of either party is requested or required under the terms of this Agreement, then any such approval, consent or cooperation shall not be unreasonably withheld or delayed.

30. This Agreement may be executed in multiple counterparts each of which shall be deemed

IT IS SO AGREED:

Department of Natural Resources and Environmental Control

By: _____
Timothy Ratsep, Environmental Program Administrator
Division of Waste and Hazardous Substances
Site Investigation and Restoration Section

Date: September 17, 2015

Respondent

Chesapeake Utilities Corporation

By: _____
Steven C. Thompson, Senior Vice President

Date: _____

IT IS SO AGREED:

Department of Natural Resources and Environmental Control

By: _____
Timothy Ratsep, Environmental Program Administrator
Division of Waste and Hazardous Substances
Site Investigation and Restoration Section

Date: September 17, 2015

Respondent

Chesapeake Utilities Corporation

By: _____
~~Steven~~ Stephen C. Thompson, Senior Vice President

Date: 09-23-15

an original but which together shall constitute one and the same instrument. An electronic signature may also constitute an original signature in accordance with 6 Del. C. Ch. 12A.

SIGNATURE PAGE FOLLOWS

EXHIBIT "A"

CONCEPTUAL SITE MODEL (CSM) AND SAMPLING AND ANALYSIS PLAN (SAP)

Conceptual Site Model and Site Summary for Seaford Town Gas Site (DE-00061)

The purpose of the Conceptual Site Model and Site Summary (CSM-SS) document is to provide a single document where all the information about the site can easily be reviewed and used for decision making at any stage of the project. This format is all inclusive and not all sections are applicable to all sites. The CSM-SS is a dynamic document that is intended to be refined and updated as new information becomes available.

At the initial stage of the development of this document, only information that is readily available and necessary for the Scoping Meeting for the investigation needs to be completed. The sections that need to be completed for the Scoping Meeting are shown in ***bold italics***. The CSM-SS should be submitted by the consultant at **least two weeks'** prior to the Scoping Meeting and should be used during the **Scoping Meeting** along with the **Sampling and Analysis Plan.**

Table of Contents

EXHIBIT 3

1.0 Site Description

SECTIONS	DESCRIPTION	COMMENTS	MAPS, PHOTOS & TABLES	REFERENCE USED
1.1 Site Location (Address and Tax Parcel ID)	Budd Street Seaford, Delaware 19973 Sussex County Tax Parcel 5-31-13.00-0006.00		*Figure 1 – Overview Map*	
1.2 Site Description (Acreage, Layout, current buildings, undeveloped areas, parking facilities/paved areas, etc)	Approximate Acreage: 0.79 acres Current Layout: Fenced area for storage of equipment and dry material (i.e. polyethylene pipe. cr-6 aggregate. topsoil (clean backfill) and selective fill) storage yard for natural gas distribution operations. A natural gas regulation station (Photograph 1 and 2).		*Photographs* *Figure 2 – Sample Location Map*	
1.3 Current Zoning and future zoning	The site is zoned Light Industrial.			
1.4 Existence of infrastructure (i.e., sewer, water, roads etc.)	Electric is provided by aboveground utility poles. Water is available by the City of Seaford. The Site is located at the end of South Shipley Road on Budd Street.			

EXHIBIT 3

2.0 Site Developer and Development Plan

SECTIONS	DESCRIPTION	COMMENTS	MAPS, PHOTOS & TABLES	REFERENCE USED
2.1Developer/Applicant Name and Address	Sussex Gas Company Chesapeake Utilities Corporation P.O. Box 1769 Dover, Delaware 19903 Attn: Mr. David DeCaro			
2.2 Current Owner Name and Address (if different from 2.1)	Same as above.			
2.3 Proposed future use and development plan	Fenced area for storage of equipment and dry material (i.e. polyethylene pipe. cr-6 aggregate. topsoil (clean backfill) and selective fill) storage yard for natural gas distribution operations. A natural gas regulation station.			
2.4 Project start date and completion date (Project Schedule)	Not Applicable. No future development is proposed at this time.			
2.5 Consultant Name and Address	Duffield Associates, Inc. 5400 Limestone Road Wilmington, DE Attn: Christopher Whallon			

EXHIBIT 3

3.0 Site Regulatory/Operational/Investigation History

SECTIONS	DESCRIPTION	COMMENTS	MAPS, PHOTOS & TABLES	REFERENCE USED
3.1 Operational History and known or potential use of chemicals or hazardous substances	According to Sanborn fire insurance maps (Sanborn Maps) from 1931, 1948, and 1959, the Site was identified as "Sussex Gas Co.", which stored natural gas. The Sanborn Maps reported "No Manufactured Gas Onsite" Piped from Salisbury."			Sanborn fire insurance maps DNREC's March 1984 Preliminary Site Assessment TetraTech's February 2015 Facility Evaluation report
	According to the State of Delaware, Department of Natural Resources and Environmental Control (DNREC), the Property was a "coal gas plant" until approximately 1950. The Site was bought by Chesapeake Utilities Corporation in approximately 1950 and reportedly changed over to propane/air. By 1958, the Site was switched to natural gas. In 1984, the Site was used as a transfer station for natural gas and storage of propane tanks. Chesapeake Utilities Corporation presently (February 2015) uses the Site as storage and staging areas for trucks and equipment.			
	Reportedly, the "coal gas plant" burned coal at low temperature and oxygen to produce gas. The gas was then sent through scrubbers to remove impurities, such as coal tar and naphthalene. The impurities were sold to local businesses (e.g., roofing companies) instead of the impurities being disposed or stored off-site.			
3.2 Regulatory History	In March 1984, DNREC performed a Preliminary Assessment of the Site, which was identified as a former "coal gas plant." DNREC did not find evidence of a former coal gas plant, during historical records review or site visit. No historical waste disposal records or evidence of by-products from coal gas plant operations were observed during DNREC's site visit. Due to insufficient knowledge of the former coal gas plant operations, DNREC recommended a low priority site inspection be			DNREC's March 1984 Preliminary Site Assessment TetraTech's February 2015 Facility Evaluation report

EXHIBIT 3

	performed.			USEPA May 1985 Tentative Disposition Form
	In May 1985, the Environmental Protection Agency (EPA) inspected the site and issued a "Tentative Disposition" of the potential hazardous waste site, reporting that no further action was necessary at that time.			
	At the request of DNREC-Site Investigation and Restoration Section (DNREC-SIRS), a Facility Evaluation was performed and a report was prepared by TetraTech in February 2015. Substances that may have been associated with historic site operations were reported in soil and groundwater that were above DNREC Screening Levels.			
	DNREC (SIRS) issued a "Voluntary Cleanup Program Application" letter to Chesapeake Utilities Corporation (CUC) on February 24, 2015. DNREC-SIRS reported that further action at the Site was required due to indications of a release on the Site from the February 2015 Facility Evaluation report. The letter identified CUC as a potentially responsible party (PRP). The letter required CUC to respond within 30 days whether they wish to be entered into the Voluntary Cleanup Program (VCP).			
	On April 2, 2015, Chesapeake Utilities Corporation (CUC) submitted a Voluntary Cleanup Program Application to DNREC-SIRS.			
3.3Investigation History	DNREC's March 1984 Preliminary Site Assessment – To address whether a release has occurred due to reported historic use of the Site as a "coal gas plant".			
	USEPA May 1985 Tentative Disposition Form – Determination of no further action with respect to EPA's historical records and preliminary investigation of the Site with respect to reported			

EXHIBIT 3

	historic use as a "coal gas plant."			
	TetraTech's February 2015 Facility Evaluation report – To further address Site conditions via subsurface investigation and sampling as a result of reported historic use of the Site as a "coal gas plant."			
	On April 2, 2015, Chesapeake Utilities Corporation (CUC) submitted a Voluntary Cleanup Program Application to DNREC-SIRS.			

4.0 Potential Contaminants and Source Areas

SECTIONS	DESCRIPTION	COMMENTS	MAPS, PHOTOS & TABLES	REFERENCE USED
4.1 Known Release Areas on Site	During TetraTech's Facility Evaluation on the Site, eleven soil samples, four groundwater samples, and quality assurance/quality control samples were analyzed for volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), and metals. Nine SVOCs were detected in soil samples above DNREC's Screening Levels. Benzene, ethylbenzene, total xylenes, and mercury were detected in groundwater samples above DNREC's Screening Levels. Samples with reported substances above regulatory standards were primarily located within the fenced-in portion of the Site.			TetraTech's February 2015 Facility Evaluation report
4.2 Potential Source areas /areas of contamination on Site	The fenced-in area was reported to be the only area of potential contamination.		*Figure 2 - Sample Location Map*	TetraTech's February 2015 Facility Evaluation report

EXHIBIT 3

5.0 Adjacent Properties and Release Sites

SECTIONS	DESCRIPTION	COMMENTS	MAPS, PHOTOS & TABLES	REFERENCE USED
5.1 List all adjacent site land uses(past & present)	Current adjacent sites are: North, East, and West: Commercial/Light Industrial Use sites (Photographs 3 and 4) South: Railroad Tracks (Photographs 5 and 6) Past adjacent site uses appear to have been for light industrial and commercial use.		*Photographs*	
5.2 Describe any known or potential contaminant sources on adjacent sites.	No adjacent contaminant sources have been identified. However, reportedly a fire occurred within the past several years involving the warehouse located to the west of the property on an adjacent tax parcel. It has been suggested to CUC that, at the time of the fire, the warehouse may have contained "chemicals." Photographs 7 and 8, attached, depicted charred and melted materials resulting from the fire. Apparently some of this fire-related debris remains on the adjacent property along the boundary shared with the site.		*Photographs*	

6.0 Geologic and Hydrogeologic Setting

SECTIONS	DESCRIPTION	COMMENTS	MAPS, PHOTOS & TABLES	REFERENCE USED
6.1 Regional Geology	The Seaford Town Gas site lies within the Atlantic Coastal Plain Physiographic Province consisting of Holocene sediments of the Columbia Group.			TetraTech's February 2015 Facility Evaluation report

EXHIBIT 3

6.2 Site Geology	Generally, soil conditions at the Property consisted of gravel or topsoil overlaying reddish-brown to brown silt and light gray to light brown medium to coarse sand.			TetraTech's February 2015 Facility Evaluation report NRCS Web Soil Survey, USDA
6.3 Regional Hydrogeology	Site soils are mapped entirely as Henlopen-Rosedale-Urban land complex. This type of soil consists of sandy eolian deposits and loamy fluviomarine sediments, and is somewhat excessively drained to well drained with a water table typically 42 to greater than 80 inches below the surface. Groundwater was expected to flow southeast towards the Nanticoke River.			TetraTech's February 2015 Facility Evaluation report
6.4 Site Hydrogeology	During TetraTech's Facility Evaluation, soil borings and monitoring wells were performed and groundwater was encountered at depths ranging from 14 to 18 feet below the ground surface. Existing groundwater monitoring wells on the Site did not suggest a large gradient in groundwater elevations.			TetraTech's February 2015 Facility Evaluation report

EXHIBIT 3

7.0 Surface and Subsurface Soil

SECTIONS	DESCRIPTION	COMMENTS	MAPS, PHOTOS & TABLES	REFERENCE USED
7.1 Surface Soil				
7.1.1 Potential Contamination areas and contaminants (include concentration ranges, if known) for surface soil	The analytical results from soil samples collected at the Site reported the presence of elevated concentrations of semivolatile organic compounds (SVOCs), primarily polycyclic aromatic hydrocarbons (PAHs), and mercury, with respect to DNREC Screening Levels. Soil samples were primarily elevated in concentration within the fenced-in portion of the Site.	TetraTech's February 2015 Facility Evaluation report: • PAHs – o 1,1'-Biphenyl – 24 milligrams per kilogram (mg/kg) o 2-methylnaphthalene – 72 mg/kg o Benzo(a)anthracene – 61 mg/kg o Benzo(a)pyrene – 49 mg/kg o Benzo(b)fluoranthene – 76 mg/kg o Benzo(k)fluoranthene – 34 mg/kg o Dibenz(a,h)anthracene – 9 mg/kg o Indeno(1,2,3-cd)pyrene –53 mg/kg o Naphthalene – 100 mg/kg • Mercury– 5.3 mg/kg		
7.1.2 Potential Receptors	Site workers, sampling teams, trespassers			

EXHIBIT 3

7.2 Subsurface Soil				
7.2.1 Potential Contamination areas and contaminants (include concentration ranges, if known) for sub-surface soil	The analytical results from soil samples collected at the Site indicated the presence of elevated concentrations of VOCs and SVOCs, primarily PAHs, with respect to DNREC Screening Levels. Soil samples were primarily elevated in concentration within the fenced-in portion of the Site.	TetraTech's February 2015 Facility Evaluation report: • Ethylbenzene – 28 mg/kg • Xylenes – 73 mg/kg • PAHs – o 1,1'-Biphenyl– 21 mg/kg o 2-methylnaphthalene – 20 mg/kg o Benzo(a)anthracene – 54 mg/kg o Benzo(a)pyrene – 50 mg/kg o Benzo(b)fluoranthene– 38 ug/L o Benzo(k)fluoranthene – 19 mg/kg o Dibenz(a,h)anthracene –3.7 mg/kg o Indeno(1,2,3-cd)pyrene –26 mg/kg o Naphthalene –19 mg/kg	***Figure 2 - Sample Location Map***	
7.2.2 Potential Receptors	Site excavation workers, sampling teams, trespassers			

EXHIBIT 3

8.0 Groundwater

SECTIONS	DESCRIPTION	COMMENTS	MAPS, PHOTOS & TABLES	REFERENCE USED
8.1 Background contamination	Groundwater samples collected on the Site reported elevated concentrations of benzene, ethylbenzene, total xylenes, SVOCs, and metals, with respect to DNREC's July 2014 Screening Levels, primarily in monitoring wells located within the fenced-in portion of the Site (west).	TetraTech's February 2015 Facility Evaluation report: • Benzene – 27 micrograms per liter (ug/L) • Ethylbenzene – 30 ug/L • Total Xylenes – 180 ug/L • PAHs: o 1,1'-Biphenyl – 22 ug/L o 2-Methylnapthalene – 150 ug/L o Benzo(a)pyrene – 0.84 ug/L o Fluorene – 40 ug/L o Naphthalene – 880 ug/L o Phenanthrene – 47 ug/L • Total Metals: o Iron – 22,000 ug/L o Manganese – 591 ug/L o Mercury – 0.3 ug/L • Dissolved Metals: o Cobalt – 4.1 ug/L o Iron – 20,900 ug/L o Manganese – 512 ug/L o Mercury – 0.2 ug/L		
8.2 Distance to Nearest drinking water source	The Site is approximately 2,500 feet south (downgradient) of a Wellhead Protection Area.			Delaware Environmental Navigator

EXHIBIT 3

8.3Predominant use of groundwater in the area and Site	Public water services the area surrounding the Property. Groundwater is predominantly not used in the area of the site.			
8.4 Depth & direction of groundwater flow of the uppermost aquifer	Based on the proximity of the Nanticoke River to the Site, groundwater is expected to flow to the southeast. Depth of groundwater was estimated to between 14 feet to 18 feet below ground surface.			
8.5 Deeper aquifer and impermeable layers (depth, thickness and flow direction	Principal geologic units in the vicinity of the site include Pleistocene sands (Nanticoke deposits) which are up to 10 feet thick in nearby logs) that are described as unconformably overlying Pliocene sands and clayey sands of the Beaverdam fm. Nearby logs describe the Beaverdam as approximately 50 to 80 feet thick. The Nanticoke deposits and Beaverdam fm are considered as part of the Columbia group, which is both unconfined and confined (semi-confined) in this part of Sussex County. Unconformably underlying the Beaverdam fm are Miocene sands and clayey sands of the Manokin fm, which extend to at least 80 feet below ground surface in the vicinity of the site. Both the Columbia (Beaverdam) and Manokin are used as sources of water in Sussex County. Underlying the Manokin Aquifer are less permeable units of the Lower Mankin and St.			Delaware Geological Survey's July 1995 "Geology of Seaford Area, Delaware," Geologic Map No. 9 Delaware Geological Survey's June 6, 2014,"An overview of aquifer resources and groundwater withdrawals, Kent and Sussex Counties, Delaware" presentation to the Delaware Center for the Inland Bays

EXHIBIT 3

	Mary's fms, which are Miocene in age. Below the St. Mary's fm are the Miocene aquifers of the Choptank and Calvert formations.			
8.6 Distance to Water Resource Protection Area and to GMZ (if applicable)	The Site is approximately 2,500 feet south (downgradient) of a Wellhead Protection Area. The Site falls within a Recharge Area.			Delaware Environmental Navigator
8.7 Potential Contaminants (include concentration ranges, if known)	Benzene, ethylbenzene, total xylene, PAHs, and metals.			
8.8 Potential Receptor(s)	Site excavation workers, sampling teams			

EXHIBIT 3

9.0 Surface Water

SECTIONS	DESCRIPTION	COMMENTS	MAPS, PHOTOS & TABLES	REFERENCE USED
9.1 Nearest surface water body (include distance from site)	The Nanticoke River is approximately 850 feet southeast of the Site.		*Figure 1- Overview Map*	
9.2 Site Surface drainage direction	Based on topographic mapping, the site appears to drain towards the Nanticoke River to the southeast.		*Figure 1- Overview Map*	
9.3 Usage of surface water at the area and Site	Not applicable.			
9.4 Potential Contaminants (include concentration ranges, if known)	Not applicable.			
9.5 Receptors	Nanticoke River			
9.6 Offsite source of Contamination	Not applicable.			
9.7 Groundwater to surface water loading	Not estimated.			

EXHIBIT 3

10.0 Sediment

SECTIONS	DESCRIPTION	COMMENTS	MAPS, PHOTOS & TABLES	REFERENCE USED
10.1 Background contamination	No sediment was identified on the Site.			
10.2 Site related contaminants	Not applicable.			
10.3 Potential Receptor(s)	Not applicable.			

11.0 Air (Vapor Intrusion)

SECTIONS	DESCRIPTION	COMMENTS	MAPS, PHOTOS & TABLES	REFERENCE USED
11.1 Contaminant with Vapor Intrusion Potential	The potential for vapor intrusion issues may exist at the site. Benzene, ethylbenzene, and total xylenes are present in groundwater at elevated concentrations with respect to DNREC's Screening Levels.			
11.2 Current & Potential buildings within 100 feet and type of building	There is one building located on the Property, which reportedly, currently functions as a storage shed. This building is reported to be constructed at-grade and does not extend into the subsurface.			
11.3 Preferential Pathway	None identified.			

EXHIBIT 3

12.0 Ecological Concern

Are any of the following ecologically sensitive areas (ECSA) present on or adjacent to the site? If the answer is "YES" to any of these questions, then further ecological evaluation may be necessary.

Criteria	YES or NO	DESCRIPTION	COMMENTS	GRAPHICS DATA TABLE	REFERENCE USED
12.1 ECSA on or adjacent to site	NO				
12.1.1 Critical Habitat for endangered or threaten species	NO				
12.1.2 Parks, wildlife refuge	NO				
12.1.3 Coastal Barriers	NO				
12.1.4 Spawning, migration and feeding areas	NO				
12.1.5 Water way (stream, lake etc.)	NO				
12.1.6 Wetland	NO				Delaware Environmental Navigator
12.2 Site Within 2,000 feet of an ECSA	NO				
12.2.1 Connected to an ECSA via open-space, wooded area, ag land, perennial water body or other natural corridor?	NO				
12.2.2 Storm runoff from the site discharges via a pipe or drainage swale directly to the ECSA?	NO				
12.2.3 Evidence of soil erosion from the site such as gulleys, washout features	NO				
12.3 The site supports fauna with a shelter or food source	NO				
12.4 Evidence of stressed veg., barren soil, dead animals, fish kills or other ecological detriments?	NO				

EXHIBIT 3

13.0 Asbestos and Lead Issues

SECTIONS	DESCRIPTION	COMMENTS	MAPS, PHOTOS & TABLES	REFERENCE USED
13.1 Was lead paint survey conducted? Type of lead present in the buildings	No.			
13.2 Was asbestos survey conducted? Type of asbestos present and is it friable	No.			

EXHIBIT 3

14.0 Community Outreach

SECTIONS	DESCRIPTION	COMMENTS	MAPS, PHOTOS & TABLES	REFERENCE USED
14.1 Public Representatives (names and contact information)	Representative Daniel B. Short Legislative District: 39 411 Legislative Avenue Dover, DE 19901 Phone: (302) 744-4172 Fax: (302) 739-2773 Senator Bryant L. Richardson Legislative District: 21 411 Legislative Avenue Dover, DE 19901 Phone: (302) 744-4298			
14.2 Community groups	None identified.			
14.3 Known areas of Public concern/issues	None.			
14.4 Public Outreach Plan	None.			

EXHIBIT 3

15.0 Other Federal/State/ Local Agency Involvement

(Identify the agencies, issues and contacts related to this site. **Fill in only the items that apply**)

Agencies	Issues/Involvements	Contact	Comments
15.1 DNREC Tank Management Branch	Not applicable.		
15.2 DNREC Solid and Hazardous Waste Branch	Not applicable.		
15.3 DNREC Sediment & Storm water Management Section	Not applicable.		
15.4 DNREC Wetland & Subaqueous Land Section	Not applicable.		
15.5 Delaware State Historic Preservation Office	Not applicable.		
15.6 Fire Marshall's Office	Not applicable.		
15.7 Del DOT	Not applicable.		
15.8 DNREC Groundwater Discharge	Not applicable.		
15.9 DNREC Parks & Recreation	Not applicable.		
15.10 City Planning Office	Not applicable.		
15.11 County Planning Office	Not applicable.		
15.12 DEDO	Not applicable.		
15.14 Coastal Zone	Not applicable.		
15.15 Federal Agencies (TSCA, EPA, ACOE, etc)	EPA – Region III	215-814-5000	

EXHIBIT 3

16.0 Site Conceptual Model

16.1 Conceptual Site Model Table

Known and Potential Sources	Impacted Media	Contaminants of Concern	Exposure Route	Receptors		Comments
				Current	Future	
Potential releases from historic use of the Site as a "coal gas plant."	Soil	Ethylbenzene, total xylenes, PAHs, mercury	Inhalation, ingestion, and dermal contact	Trespasser	Outdoor worker, site occupants, excavator, and trespasser	
	Groundwater	Benzene, ethylbenzene, total xylenes, PAHs, metals	Ingestion, dermal contact	None	None	

**** SEE APPENDIX C FOR SAMPLING ANALYSIS PLAN

Notes:

Sources: historic fill, spill areas, USTs, hotspots (arsenic, lead, NAPL), etc

Impacted Media: Soil, Groundwater, Sediment, Surface water, Soil vapor, etc.

Contaminant of Concern: dominant contaminants that will drive the risk, etc

Exposure routes: inhalation of vapors, dust, dermal, ingestion, fish consumption, etc.

Receptors: resident, excavator, future construction worker, recreational user, office worker, trespasser, gardener, fish and other ecological receptors, etc.

16.2 Conceptual Site Model Map

See Figure 2.

16.3 Conceptual Site Model Cross-section

A cross-sectional view was not performed due to lack of current subsurface data at the Property.

EXHIBIT 3

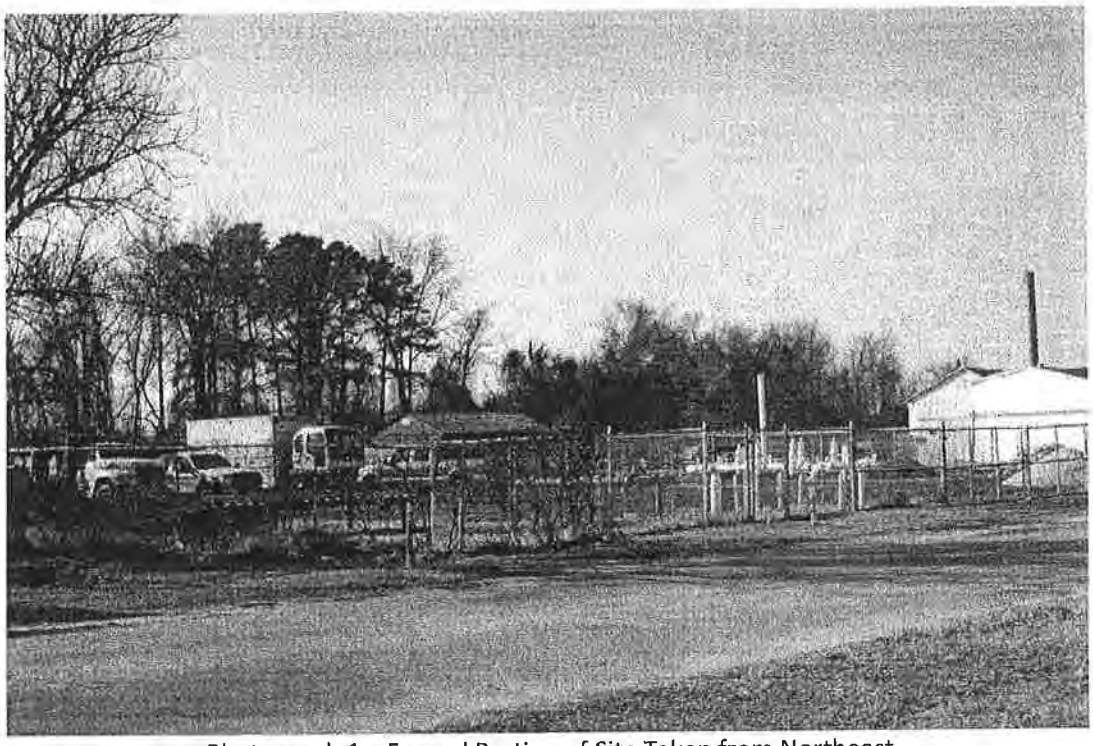
PHOTOGRAPHS

FIGURES

APPENDICES

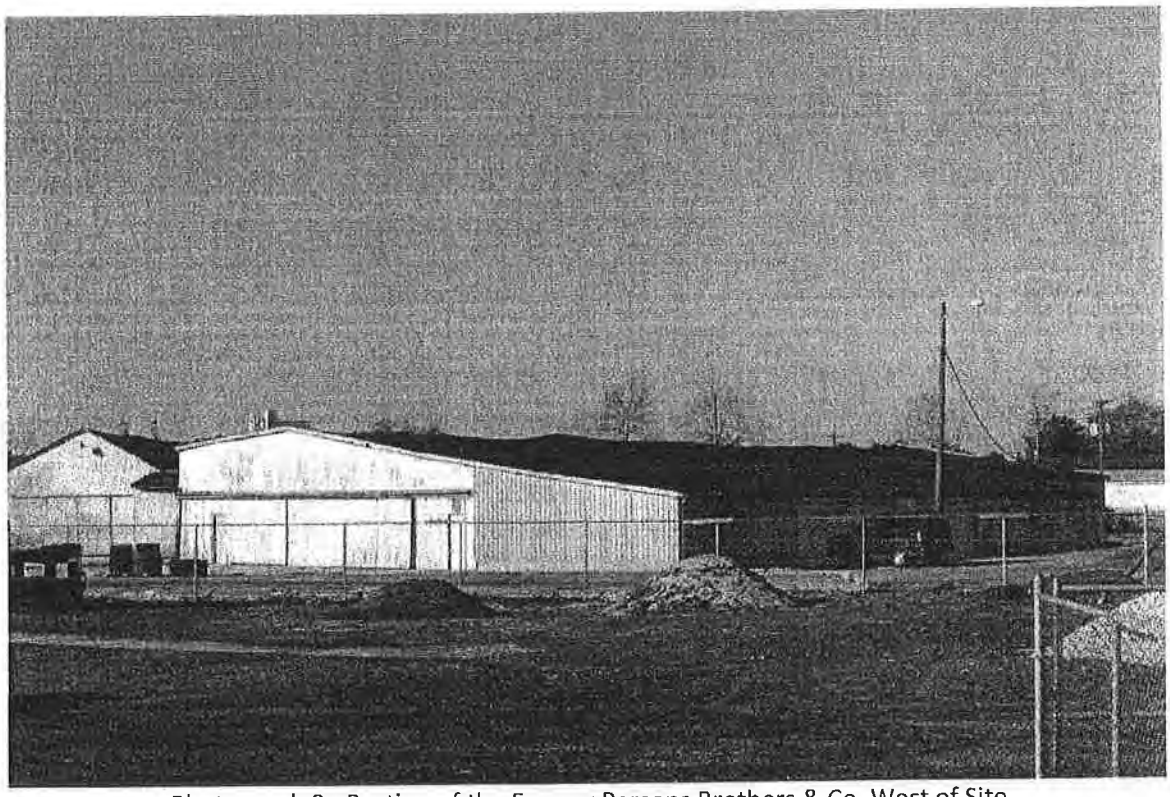
EXHIBIT 3

PHOTOGRAPHS

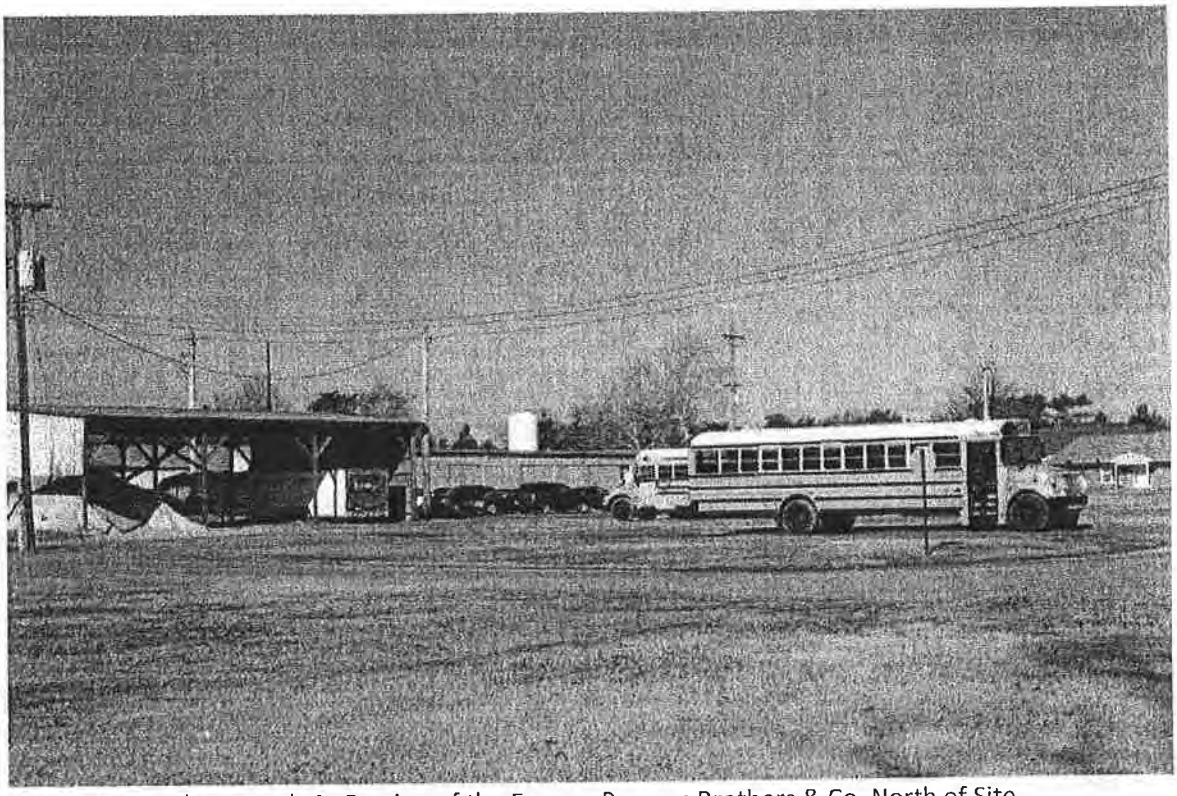


Photograph 1 – Fenced Portion of Site Taken from Northeast

Photograph 2 - Fenced Gas Transmission Lines



Photograph 3 - Portion of the Former Parsons Brothers & Co. West of Site

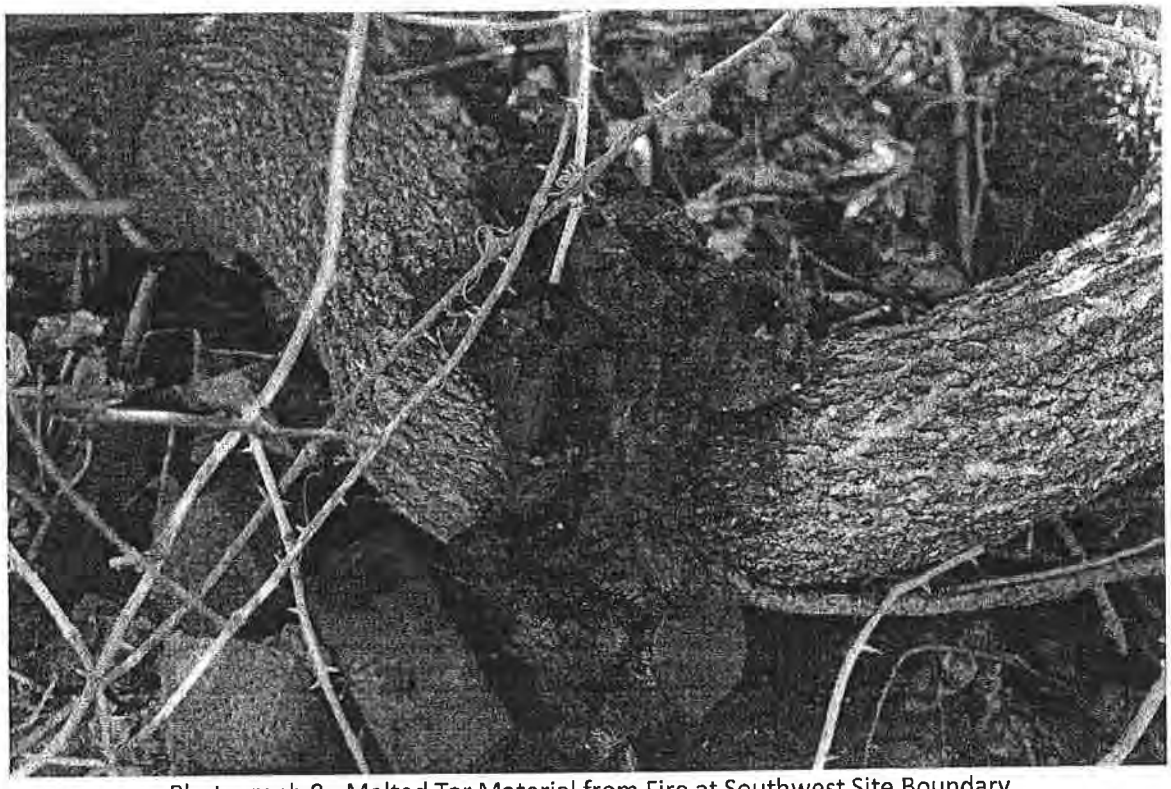


Photograph 4 - Portion of the Former Parsons Brothers & Co. North of Site

Photograph 5 - Railroad Related Materials and Railroad Tracks South of Site

Photograph 6 - Railroad Related Materials and Railroad Tracks South of Site (cont.)

Photograph 7 - Charred Material from Fire at Southwest Site Boundary



Photograph 8 - Melted Tar Material from Fire at Southwest Site Boundary

FIGURES